

CLAIMS:

1. A fissure repair device, the device including a first portion, a second portion and a variable link between the first portion and second portion, in which the first and second portions are portions of a common element, one of the first or second portions being formed by one or both end portions of the element, the first portion being linked to the second portion by one or more link portions, the one or more link portions being portions of the common element.

5 2. A device according to claim 1 in which the first portion is formed by the intermediate portion of the element and the second portion is formed by the two end portions of the element.

10 3. A device according to claim 1 or claim 2 in which the first portion includes a first part, second part and third part, the first portion being provided with one or more holes in the second part thereof, the first portion being provided in the first and third parts thereof with one or more further sets of holes.

15 4. A device according to claim 3 in which the first part and/or third part are folded against the second part, the holes in the first and third parts align with holes in the second part.

5 5. A device according to any preceding claim in which the second portion is provided with one or more areas of reinforcement on each of the end portions of the element.

20 6. A device according to any preceding claim in which a link portion is provided between the first portion and second portion.

7. A device according to claim 6 in which the link portion(s) are made of one or more materials and/or incorporate one or more materials and/or be coated with one or more materials which promote tissue in growth and/or the supply of blood.

8. A device according to claim 6 or claim 7 in which a fold is provided between a first second portion forming part and the first link portion and/or between the second link portion and the second second portion forming part, a fold is provided between the first link portion and the first portion and/or between the first portion and the second link portion, a fold is provided between a first part of the first portion and a second part of the first portion and/or between a third part of the first portion and a second part of the first portion.

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9. A device according to any of claims 6 to 8 in which, when folded, the first link portion contacts the second link portion and the first and second link portions are substantially parallel to one another.

10 10. A device according to claim 9 in which the first and/or second link portions are at 90° +/- 5° to the first portion and/or second portion.

11. A device according to any of claims 6 to 10 in which the first and/or second link portions contact the sides of the fissure.

15 12. A device according to any preceding claim in which the first portion and second portion define the verticals of an H shape, particularly when considered in plan view in an intervertebral disc space, and the link portion(s) define the cross bar of an H shape.

13. A device according to any preceding claim in which at least two variable links are provided, one provided between one end of the first portion and the second portion and the other is provided between the other end of the first portion and the second portion.

20 14. A device according to any preceding claim in which a variable link is used to vary the distance between one end of the first portion and the same end of the second portion and/or to vary the tension between one end of the first portion and the same end of the second portion and/or to pull the first portion against the inside of the annulus or a part thereof and/or to pull the second portion against the outside of the annulus.

15. A device according to any preceding claim in which a receiving space for the annulus to one side of the fissure is provided between a first end of the first portion and a first end of the second portion and a receiving space for the annulus to the other side of the fissure is provided between a second end of the first portion and a second end of the second portion.

5 16. A device according to any preceding claim in which the link portion or portions pass through the fissure, from inside the annulus to the outside thereof and the link portion or portions keep the sides of the fissure apart.

10 17. A fissure repair device, the device including a first portion, a second portion and a variable link between the first portion and second portion, in which the first and second portions are portions of a common element, the first portion being linked to the second portion by one or more link portions, the one or more link portions being portions of the common element, the second portion being formed by both end portions of the element.

15 18. A device according to claim 17 in which the first portion is in the form of a first second portion forming part, first link portion, first portion, second link portion and second second portion forming part, with this being the sequence from one end to the other of the element.

19. A device according to claim 17 or claim 18 in which one of the second portion forming parts and/or the link portion connected to it, is provided with a reduced height part and/or neck part and the other of the second portion forming parts and/or the link portion connected to it, is provided with an aperture.

20 20. A device according to claim 19 in which the second portion forming part provided with the reduced height part and/or neck part is passed through the hole in the other second portion forming part.

21. A method of repairing a fissure in a material, the method including the steps of:-
25 providing a fissure repair device, the device including a first portion, a second portion and a variable link;
deploying the first portion of the device inside the fissure;

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deploying the second portion of the device outside the fissure;
connecting the first portion to the second portion at one or more locations using the
variable link, the variable link passing through the material.